

```
/* lexfn.h
```

```
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```

```
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```

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```

```
-- Revisions -----
```

```
Logfile: %F%
```

```
Revision: %I%
```

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Date: %G%
```

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Modtime: %U%
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Author: @a
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```
-- SCCS -----
```

```
Header file for input definitions.
```

```
*/
```

```
#ifndef LEXFN_DEFINED
```

```
/* ----- Inclusions */
```

```
#include "lex.h"
```

```
/* ----- Constants */
```

```
#define N_TAU_EXPOSE 40 /* Number of Tau's to expose exp() inputs */
```

```
/* Input Function constants */
```

```
#define IFN_NULL 0
```

```
#define IFN_CONSTANT 1
```

```
#define IFN_PERDOSE 2
```

```
#define IFN_PERRATE 3
```

```
#define IFN_PEREXP 4
```

```
#define IFN_NDOSES 5
```

```
/* ----- Enumerations */
```

```
/* ----- Typedefs */
```

```
/* The following structure is used for predefined period input
```

```

    functions.
*/

typedef struct tagIFN {          /* Input Function struct */
    int iType;          /* IFN_ */

    BOOL bOn;          /* Flag to indicate exposure is On */

    double dMag;      /* Magnitude of input */
    double dTper;     /* Duration of Period */
    double dT0;       /* Starting time of exposure */
    double dTexp;     /* Exposure time, input is 0.0 after T0 + Texp */

    double dDecay; /* For exponential inputs, the exponential decay rate
                    Exposure lasts for N_TAU_EXPOSE Tau periods. (tau=1/Decay)
                    After this, input is considered to be negligible. */

    double dVal;      /* Current value as calculated by CalcInputs */

    double dTStartPeriod; /* Start of current period - for
NextTransitionTime */

    HANDLE hMag;      /* Handle to magnitude */
    HANDLE hTper;     /* Handle to period */
    HANDLE hT0;       /* Handle to starting time */
    HANDLE hTexp;     /* Handle to exposure time */
    HANDLE hDecay;    /* Handle to exponential decay rate */

    int nDoses;       /* Number of dose/transition pairs for IFN_NDOSES */
    int iDoseCur;    /* Current Dose */
    PDOUBLE rgT0s;
    PDOUBLE rgTexps;
    PDOUBLE rgMags;

} IFN, *PIFN;        /* struct tagIFN */

/* ----- Macros */

/* ----- Globals/Externals */

/* ----- Prototypes */

int GetFnType (PSTR szName);
void InitIFN (PIFN pifn);
BOOL DefDepParm (PSTR szLex, PDOUBLE pdValue, HANDLE *phvar);
BOOL GetInputArgs (PINPUTBUF pibIn, PIFN pifn);
BOOL GetNNumbers (PINPUTBUF pibIn, PSTR szLex, int nNumbers, PDOUBLE
rgd);
BOOL GetNDoses (PINPUTBUF pibIn, PSTR szLex, PIFN pifn);
BOOL GetInputFn (PINPUTBUF pibIn, PSTR sz, PIFN pifn);

#define LEXFN_DEFINED
#endif

```

